

CLAIMS

1. System for machining objects (11) using a laser beam, characterised in that it comprises:

- 5 - a supply of objects with prepositioning on their reference surface,
- an object support tray (10),
- a galvanometric head (12) comprising:
 - a first wide field camera (13) with its focusing lens (14), with a first filter (15) located at the output from the first camera,
 - a second narrow field camera (16) with its focusing lens (17), with a second filter (18) located at the output from the second camera,
 - a guide mirror (20),
 - galvanometric deflection mirrors (21, 22),
 - a lens (23) that displays at least one object (11) located on the tray (10).
- 10 - a laser source (24),
- a computer (25) on which a shape recognition software (26) is installed for checking operation of the said first camera, the said second camera, the said laser source and movement control means for the said galvanometric head (XYZ).

2. System according to claim 1, comprising first and second reflecting galvanometric mirrors (21, 22).

30 3. System according to claim 1, comprising a retractable mirror (20).

4. System according to claim 1, comprising a flat field lens (23).

5 5. System according to claim 1, comprising a belt (19) carrying objects to be machined on their reference surface, preceded by a pre-positioning supply for parts (11).

10 6. System according to claim 3, comprising a reactive gas source (32) close to the tray (10).

15 7. System according to claim 1, in which the filter (15) at the output from the first camera (13) allows a wavelength of about 600 nm to pass.

20 8. System according to claim 1, in which the laser source (24) is a source with a wavelength of about 1064 nm, the filter (18) at the output from the second camera (16) allowing such a wavelength to pass.

9. System according to claim 1, in which machining corresponds to marking, welding, drilling, cutting or heat treatment.

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10. Method for machining objects using a laser comprising an object support tray (10), a galvanometric head (12), a laser source (24), and a computer (25), the said method including steps to:

30 - deposit objects (11), positioned on their reference face, on the said tray (10),

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- display of all these objects (11) in wide field, with identification of each object (11) with its position and its orientation,
- display the area to be machined in narrow field with high resolution, on one of the objects (11),
- machining of this object (11) using a beam output from the laser source.

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